



**UNITED STATES DEPARTMENT OF COMMERCE
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
08/470,424	06/06/95	YOKOMIZO	0

020457 PM52/0810
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EXAMINER

BEHREND, H

ART UNIT

PAPER NUMBER

3641

DATE MAILED: 08/10/98

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

470424

Applicant(s)

Yokomizo et al

Examiner

Behren

Group Art Unit

3641

---The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address---

Period for Response

A SHORTENED STATUTORY PERIOD FOR RESPONSE IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a response be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for response specified above is less than thirty (30) days, a response within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for response is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to respond within the set or extended period for response will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- ☒ Responsive to communication(s) filed on 5-21-98
- ☒ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 24-29, 38-57 is/are pending in the application.
- ☐ Of the above claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 24-29, 38-57 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- ☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been received.
- ☐ received in Application No. (Series Code/Serial Number) _____.
- ☐ received in this national stage application from the International Bureau (PCT Rule 1.7.2(a)).

*Certified copies not received: _____

Attachment(s)

- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____
- ☒ Notice of References Cited, PTO-892
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Other _____

Office Action Summary

1. Applicants election with traverse of species R and B, is acknowledged. Applicant argues that the election of species requirements should be withdrawn because generic claims are present.

However, as applicant is presumably aware, the presence of a generic claim does not make an election of species requirement, improper.

The restriction requirement between inventions II and III, has been withdrawn.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 24-29, 38-57 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims are vague, indefinite and incomplete.

Claims such as claim 24 refer to a "means for regulating...", and various steps (each with a function); claims such as claims 51 and 52 refer to a "step of regulating...", and various steps (each with a function) and; claims such as claim 56 refer to a step of "controlling the amounts of voids..." and various steps (each with a recited function).

Such claims are thus in the form of a means-plus-function and/or a step-plus-function.

Note that MPEP 2181 indicates that claims containing a step-plus-function, are treated the same as a means-plus-function.

However, the specification itself does not refer to any means, etc., for actually accomplishing said "regulating", "controlling", etc.

It is noted that the specification does refer to the presence of a pump. However, the pump cannot be the means or structure for accomplishing said "regulating", "controlling", etc., because a pump is just an apparatus or machine. The pump is not capable (on its own) of changing the flow rate (as claimed) or controlling the amounts of voids (as claimed), in the ranges (as claimed) and at the indicated times (as claimed).

Some pumps require a motor for proper operation, however, the specification does not refer to a motor driven pump.

The specification also does not refer to the presence of a switch or some other means for causing the pump to change its speed of operation or flow (nor does it refer to the presence of a man, etc., to operate this switch or other means (assuming for the sake of argument that such is

what would actually be utilized to cause the change in flow rate or control of the amounts of voids)).

Note in this respect, the case law of In re Donaldson, 29 USPQ 2d 1845, particularly the first column on page 1850 which states:

"Although paragraph six statutorily provides that one may use means-plus-function language in a claim, one is still subject to the requirement that a claim "particularly point out and distinctly claim" the invention. Therefore, if one employs means-plus-function language in a claim, one must set forth in the specification an adequate disclosure showing what is meant by that language. If an applicant fails to set forth an adequate disclosure, the applicant has in effect failed to particularly point out and distinctly claim the invention as required by the second paragraph of section 112". (Underlining added).

Claims such as claim 24 are vague, indefinite, misdescriptive and incorrect in indicating that the "increasing" in the flow rate takes place throughout the whole fuel cycle, from the beginning of the cycle to the end of the cycle.

Claims such as claim 24 recite a step of raising a coolant surface by increasing the flow rate from a beginning of the fuel cycle to an end of the fuel cycle.

However, these claims such as claim 24 are vague, indefinite, incomplete, misdescriptive and inaccurate because the last step recited requires one to go back in time into the fuel cycle which has already ended, to further increase the flow rate during an end portion of the cycle which has already ended.

Clearly, it is not possible to go back in time to further increase the flow rate during an end portion of a fuel cycle which has already ended.

Claims such as claim 25 are vague, indefinite, incomplete and misdescriptive, as to how and in what manner, one can increase the flow rate to 0% of the flow rate.

Claims such as claim 38 are vague, indefinite, incomplete, misdescriptive and inaccurate as they are directed to a method of operating a reactor but, fail to recite any actual steps of said operation (i.e., the steps of "providing a resistance member...", "loading a plurality of the fuel assembly...", etc., are not the steps of operating a reactor).

Claims such as claim 38, are vague, indefinite, incomplete and misdescriptive in indicating that it is the feature of the coolant delivery port being open in a region higher than the resistance member, which guides the coolant downwardly in the coolant descending path.

5. Claims 24-29, 38-57 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

There is no support in the original disclosure for indicating that the "increasing" in the flow rate takes place throughout the whole fuel cycle, from the beginning of the cycle to the end of the cycle.

Claims such as claim 24 recite a step of raising a coolant surface by increasing the flow rate from a beginning of the fuel cycle to an end of the fuel cycle. However, there is no support in the original disclosure for the last recited step in said claims such as claim 24 (said last recited step requiring one to go back in time into the fuel cycle which has already ended, to further increase the flow rate during an end portion of the cycle which has already ended).

There is no support in the original disclosure for increasing the flow rate to 0% of the flow rate (see for example, the bottom end of the recited range in claim 25).

There is also, no support in the original disclosure for the limits of the range recited in claims such as claim 25.

The original disclosure does not refer to a method of operating a reactor utilizing the steps recited for example in claims such as claim 38 or, even the step of loading a plurality of the fuel assembly as in claim 54.

There is no support in the original disclosure for reciting that it is the feature of the coolant delivery port being open in a region higher than the resistance member, which guides the coolant downwardly in the coolant descending path (e.g. see claim 38).

6. Claims 24-29, 38-57 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

There is no adequate description nor enabling disclosure of how and in what manner, the "increasing" in the flow rate take place throughout the whole fuel cycle, from the beginning of the cycle to the end of the cycle (e.g. see claim 24).

Claims such as claim 24 recite a step of raising a coolant surface by increasing the flow rate from a beginning of the fuel cycle to an end of the fuel cycle and, a subsequent step of further increasing the flow rate during an end portion of the fuel cycle which has already ended. However, there is no adequate description nor enabling disclosure of how and in what manner,

one can somehow go back in time to get into the fuel cycle which has ended so as to further increase the flow rate at an end portion of said cycle.

There is no adequate description nor enabling disclosure of how and in what manner, a 0% change in flow rate, amounts to an increase in the flow rate (see for example, the lower limit of the range recited in claims such as claim 25).

As indicated in section 4 above, certain of the claims refer to a "means" or "step" of "regulating..." or, to a "step" of "controlling...", etc., all involving various steps (each with a recited function).

However, there is no adequate description nor enabling disclosure of the means, structure, etc., which can actually accomplish what is set forth in said claim limitations (see also the discussion of this issue in section 4 above). As set forth in In re Donaldson, 29 USPQ 2d 1845, when one employs means plus function (or step plus function) language in a claim, one must set forth in the specification an adequate disclosure showing what is meant by that language. Applicants specification does not contain said adequate disclosure showing what is meant by the language in question.

There is no adequate description nor enabling disclosure of how and in what manner, a nuclear reactor can actually be operated utilizing the actual steps recited in claims, such as claim 38 (e.g. the steps of "providing a resistance member...", "loading a plurality of the fuel assembly...", etc.).

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

a person shall be entitled to a patent unless --

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) a patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 38-40, 43, 44, 46, 47 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Patterson et al.

Patterson et al (note Fig. 1) show a fuel assembly having a plurality of fuel rods 10 held between upper tie plate 12 and lower tie plate 6, a plurality of fuel spacers 16 and, at least one water rod 18.

Patterson et al in Fig. 4 show the water rod 18 having a coolant ascending path and a coolant descending path.

Said Fig. 4 of Patterson et al show the coolant ascending path as having a coolant inlet port open in a region below the lower fuel rod supporting tie plate 6 and, the coolant descending path as having a coolant delivery port 30 arranged in a position higher than the lower fuel rod supporting tie plate 6.

Note that Fig. 1 of Patterson et al show flow openings through the lower tie plate (fuel rod support grid). The claimed "resistance member" reads on the lower tie plate of Patterson et al.

The step of regulating a flow rate of coolant (see claim 44) and the step of controlling the amounts of voids (e.g. see claim 46), do not define over whatever flow rate is utilized in Patterson et al. Said steps also read on the injection of subcooled water coolant in Patterson et al (e.g. see the paragraph bridging columns 1 and 2).

9. Claims 38, 39, 41-44, 46, 47 are rejected under 35 U.S.C. 102(a, b, e, g) as being clearly anticipated by Matzner.

Matzner shows a fuel assembly having a plurality of fuel rods R (which inherently contain fuel pellets) held between upper and lower tie plates (U, L), spacers and at least one water rod W (e.g. see Fig. 1 and cols. 1, 2, 3).

The water rod W has a coolant inlet 14 open in a region below the lower tie plate L. Water rod W has a coolant ascending path inside conduit 14 (which becomes standpipe 15) and, a coolant descending path in the annulus between pipes 15 and 18 with coolant delivery ports 20. The claimed "resistance member" reads on the lower tie plate of Matzner.

The step of regulating a flow rate of coolant (e.g. see claim 44) and the step of controlling the amounts of voids (e.g. see claim 46) do not define over whatever flow rate is utilized in Matzner. Said steps also read on the of the injection of high pressure coolant through conduit 14.

10. Claims 38-44, 46, 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Patterson et al as applied to claims 38-40, 43, 44, 46, 47 above, and further in view of either Matzner or Nelson et al.

Claim 41 recites the upper end of the coolant ascending path as being at a position lower than the upper end of the pellet-filled region.

Such however, represents no more than a conventionally known alternative expedient in this art as evidenced for example by the teaching thereof in either secondary reference and to so modify Patterson et al would accordingly have been prima facie obvious (note for example Fig. 1 of Nelson et al).

Claim 42 recites the coolant delivery port as being positioned near the lower end of the fuel pellet-filled region. Such however represents no more than a conventionally known expedient in the art and its use in Patterson et al would accordingly have been prima facie obvious.

11. Claims 38-44, 46, 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matzner as applied to claims 38, 39, 41-44, 46, 47 above, and further in view of either Patterson et al or Nelson et al.

Claim 40 recites the coolant ascending path as extending beyond the upper end of the fuel pellet-filled region.

Such however represent no more than a conventionally known alternative expedient in this art as evidenced for example by the teachings thereof in either secondary reference and to so modify Matzner would accordingly have been prima facie obvious (note for example Fig. 7 of Nelson et al).

12. Claims 38-44, 46, 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Patterson et al as applied to claims 38-40, 43, 44, 46, 47 above, and further in view of either Matzner or Kumpf.

Claim 42 recites the coolant delivery port as being positioned near the lower end of the fuel pellet-filled region. Such however represents no more than a conventionally known and advantageous expedient in this art as evidenced for example by the teachings thereof in either Matzner or Kumpf (note fig. 10) and to so modify Patterson et al would accordingly have been prima facie obvious.

Claim 41 sets forth no more than a conventionally known art alternative and as such, it is hence prima facie obvious.

13. Claims 24, 25, 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over either Japan 0220686 or Japan 0031090, in view of Sofer.

The primary references each show operating a nuclear reactor wherein the fuel assemblies have at least one water rod, in a manner such that the water rod has a steam void therein during a first part of the fuel cycle, and, is completely filled with water during a second part of the fuel cycle by increasing the coolant flow rate. While the primary references may accomplish this change in flow by changing the size of an opening in the water rod, it was also a known alternative in this art that this necessary change in flow rate could also be accomplished by changing the flow rate at which the coolant is recirculated in the reactor system (as shown for example by Sofer) and, to so modify either primary reference would accordingly have been prima facie obvious.

Note in this respect that Sofer also indicates it is advantageous to reduce the void fraction towards the end of the fuel cycle (the same as in either primary reference).

Claim 25 merely sets forth conventionally known and utilized flow rates and percentages thereof, the use of which would accordingly have been prima facie obvious.

14. Claims 24, 25, 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over either Japan 0220686 or Japan 0031090 in view of Sofer as applied to claims 24, 25, 50 above, and further in view of applicants own admission of prior art in the specification (e.g. see page 25).

The use of the claimed flow rate percentages in either primary reference would have been prima facie obvious in view of the teachings thereof in the admitted prior art in the specification.

15. Claims 24-29, 38-57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Patterson et al in view of Sofer taken with either Japan 0220686 or Japan 0031090.

Patterson et al (note Fig. 1) show a fuel assembly having a plurality of fuel rods 10 held between upper tie plate 12 and lower tie plate 6, a plurality of fuel spacers 16 and, at least one water rod 18.

Patterson et al. in Fig. 4 show the water rod 18 having a coolant ascending path and a coolant descending path.

Said Fig. 4 of Patterson et al shows the coolant ascending path as having a coolant inlet port open in a region below the lower fuel rod supporting tie plate 6 (the claimed resistance member) and, the coolant descending path as having a coolant delivery port 30 arranged in position higher than the lower fuel rod supporting tie plate 6.

The claims refer to a manner of operating a boiling water reactor wherein the water rod has a steam void therein during a first part of the fuel cycle and, is completely filled with water during a second part of the fuel cycle by increasing the coolant flow rate. Such, however, is already shown to be old and advantageous in the art by either Japan 0220686 or Japan 0031090 and, to so modify Patterson et al. would accordingly have been prima facie obvious. While either Japanese reference accomplish the desired change in flow by changing the size of an opening in the water rod, it was also known alternative in this art that this necessary change in flow rate could also be accomplished by changing the flow rate at which the coolant is recirculated in the reactor system (as shown for example by Sofer) and, to so modify the primary reference would accordingly have been prima facie obvious.

Note in this respect that Sofer also indicates it is advantageous to reduce the void fraction towards the end of the fuel cycle (the same as in either Japanese reference).

Note that claims such as claim 25 merely sets forth conventionally known and utilized flow rate percentages, the use of which would accordingly have been prima facie obvious.

16. Claims 24-29, 38-57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matzner in view of Sofer and either Japan 0220686 or Japan 0031090.

Matzner shows a fuel assembly having a plurality of fuel rods R (which inherently contain fuel pellets) held between upper and lower tie plates (U, L), spacers and at least one water rod W (e.g. see Fig. 1 and cols. 1, 2, 3).

The water rod W has a coolant inlet 14 open in a region below the lower tie plate L. Water rod W has a coolant ascending path inside conduit 14 (which become standpipe 15) and, a

coolant descending path in the annulus between pipes 15 and 18 with coolant delivery ports 20.

The lower tie plate of Matzner will function as a "resistance member".

The claims refer to controlling amounts of voids in the water rods. As indicated even by applicants own specification, the formation of voids in the water rods is dependent on the amount or rate of coolant flow produced by the circulation pump. Matzner refers to flowing coolant through the core by means of "conventional circulating pumps" (col. 3, lines 64+). Such pumps are inherently capable of operation at different flow rates. Thus, the use of a circulation pump which can operate at different flow rates and consequently produce different amounts of voids in the water rods is considered inherent in the teachings of Matzner.

The claims refer to this manner of controlling the amounts of voids in the water rods as operating the water rods with steam voids therein during a first part of the fuel cycle and, operating such that the water rods are completely filled with water during a second part of the fuel cycle. Such, however, is already, shown to be old and advantageous in the art by either Japan 0220686 or Japan 0031090 and to so modify Matzner would accordingly have been prima facie obvious. While either Japanese reference accomplishes the desired change in flow by changing the size of an opening in the water rod, it was also a known alternative in this art that this necessary change in flow rate could also be accomplished by changing the flow rate at which the coolant is recirculated in the reactor system (as shown for example by Sofer) and, to so modify the primary reference would accordingly have been prima facie obvious.

Note in this respect that Sofer also indicates it is advantageous to reduce the void fraction towards the end of the fuel cycle (the same as in either Japanese reference).

Note that claims such as claim 25 merely sets forth conventionally known and utilized flow rate percentages, the use of which would accordingly have been prima facie obvious.

17. Claims 24-29, 38-57 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Patterson et al in view of Sofer taken with either Japan 0220686 or Japan 0031090 as applied to claims 24-29, 38-57 above, and further in view of applicants own admission of prior art in the specification (e.g. see page 25).

The use of the claimed flow rate percentages (e.g. see claim 25), in the primary reference would have been prima facie obvious in view of the teachings thereof in the admitted prior art in the specification.

18. Claims 24-29, 38-57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matzner in view of Sofer and either Japan 0220686 or Japan 0031090 as applied to claims 24-29, 38-57 above, and further in view of applicants own admission of prior art in the specification (e.g. see page 25).

Claims such as claim 25, refer to use of particular flow rate percentages. However, the use of the claimed flow rate percentages in the primary reference would have been prima facie obvious in view of the teachings thereof in the admitted prior art in the specification.

19. Claims 24-29, 38-57 are rejected under 35 U.S.C. 103(a) as being unpatentable over either Japan 0220686 or Japan 0031090 in view of Sofer as applied to claims 24, 25, 50 above, and further in view of any of Matzner, Patterson et al or Kumpf.

Claims such as claim 26 refer to the water rod as having a coolant ascending path with a coolant inlet port open in a region lower than the lower tie plate and a coolant descending path

which has a coolant delivery port that is open in a region higher than the lower tie plate (the claimed resistance member).

However, such is a conventionally known and advantageous water rod configuration as shown by any of Matzner, Patterson et al or Kumpf and, to utilize this water rod configuration in either primary reference would accordingly have been prima facie obvious.

20. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

21. Claims 24-29, 38-57 are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 24-30 of copending Application No. 08/779225. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

22. Notice is taken of applicants statement on page 5 of the 3/23/98 amendment:

"submitted herewith are additional method claims 38-49, corresponding to the claims previously under consideration as well as previous method claims 24-29, all of which claims are readable on the previous elected species".

In regard to applicants statement reproduced above, it is noted that method claim 38 appears to correspond to (i.e. it is a method version of) original apparatus claim 1 of the present case.

Said original claim 1 was canceled in the 1/6/97 amendment in the response to the rejections set forth in the 7/5/96 Office action.

Notice is also taken of applicants statement on page 8 of the 5/21/98 amendment:

"Applicants note that by the present amendment, claim 44 has been amended to only recite the feature of regulating a flow of coolant, with the features deleted from claim 44 now being presented in dependent claim 51, and claim 45 amended to depend from claim 51. Claim 52 corresponds essentially to previous claim 44, written in independent form incorporating the features of its parent claim 38 therein, and independent claim 54 corresponds to claim 46 written in independent form incorporating the features of its parent claim 38 therein, with claim 53 corresponding to claim 45 dependent upon claim 52, and claims 55-57 corresponding to claims 47-49 dependent directly or indirectly from claim 54. Thus, applicants submit that newly presented claims 50-57 all fall within invention II".

Notice is also taken that claims 24-29 as presented in the 6/14/96 amendment herein, are identical to claims 24-29 as presented in the 1/6/97 preliminary amendment (and acted on) in applicants copending case SN 08/779225.

23. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

Serial Number: 08/470,424
Art Unit: 3641

Page 18

however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

24. Any inquiry concerning this communication should be directed to Mr. Behrend at telephone number (703) 305-1831.

Behrend/gj-32

8-6-98

A handwritten signature in black ink, appearing to read 'H. Behrend', with a large, stylized flourish at the end.

**HARVEY E. BEHREND
PRIMARY EXAMINER
GROUP 2200**